AMENDMENT TO THE ABSTRACT

Markup form

Profiling ~~Methods and apparatus for profiling the~~ execution of a computer program. ~~The program is executed on a computer, without the program having been compiled for profiled execution.~~ The program is coded in a mode-dependent ~~an~~ instruction set ~~in~~ which an ~~interpretation of an instruction depends on a processor mode not expressed in the binary representation of the instruction.~~ ~~The computer includes instruction~~ pipeline circuitry ~~configured to execute~~ instructions ~~of the computer, and profile circuitry configured to detect and record, without compiler assistance for execution profiling, profile~~ information describing ~~a sequence of~~ events occurring ~~in the instruction pipeline.~~ During a profile-quiescent execution interval of execution of the program ~~that induces events that match time independent~~ selection criteria of ~~profileable events to be profiled~~, the profile circuitry records no profile information ~~in response to the occurrence of profileable events.~~ After a triggering event is detected, the profile circuitry commences a profiled execution interval, and records profile information describing every profileable event during that ~~a profiled execution~~ interval that ~~matches the time-independent profileable~~ event ~~selection criteria induced during the profiled execution~~ interval. The profiled information includes at least all ~~events of the two~~ classes (i) a divergence of execution from sequential execution[[,]] and ~~(ii) a~~ processor mode changes ~~that is~~ not inferable from instruction the opcode ~~of the instruction that induces the processor mode change taken together with a processor mode before the mode change~~ instruction ~~the recording continuing until a predetermined stop condition is reached~~ The recorded profile information is efficiently tailored to annotate the profiled binary code with sufficient processor mode information to resolve mode-dependency ~~in the binary coding~~, and indicates contiguous ranges of sequential instructions executed during a profiled interval by low and high boundaries ~~of the contiguous ranges~~, indicating the high boundary by the address of the last byte ~~of the range~~. The profile information ~~further~~ identifies each distinct physical page ~~of instruction text~~ executed during the ~~execution~~ interval.

REMARKS/ARGUMENTS

This paper responds to a telephone request for an amended abstract. The amendment does not relate to any statutory requirement

The Examiner requested a replacement abstract of 150 words or less, even though the rules at the filing date permitted a longer abstract, and the new abstract rule, 37 C.F.R. § 1.72(b), does not meet requirements for retroactive effect. *Bowen v. Georgetown University Hospital*, 488 U.S. 204, 208 (1988) ("Retroactivity is not favored in the law. Thus, ... administrative rules will not be construed to have retroactive effect unless their language requires this result. ... [An agency's] rulemaking authority will not ... be understood to encompass the power to promulgate retroactive rules unless that power is conveyed by Congress in express terms.")

Nonetheless, the amended abstract is provided solely as an accommodation to current formal requirements for word count, subject to the understanding that the abstract is not to be used to interpret the claims of this application or any other, and is not to be construed as a surrender of subject matter, in the Office or elsewhere.

In view of the amendments and remarks, Applicant requests that the application be passed to issue in due course. The Examiner is urged to telephone Applicant's undersigned counsel at the number noted below if it will advance the prosecution of this application, or with any suggestion to resolve any condition that would impede allowance. Kindly charge any additional fee, or credit any surplus, to Deposit Account No. 23-2405, Order No. 114596-07-4014.

Respectfully submitted,

WILLKIE FARR & GALLAGHER LLP

Dated: April 27, 2006

By: _____
David E. Boundy
Registration No. 36,461

WILLKIE FARR & GALLAGHER LLP
787 Seventh Ave.
New York, New York 10019
(212) 728-8757
(212) 728-9757 Fax